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THE Carolina Farmer

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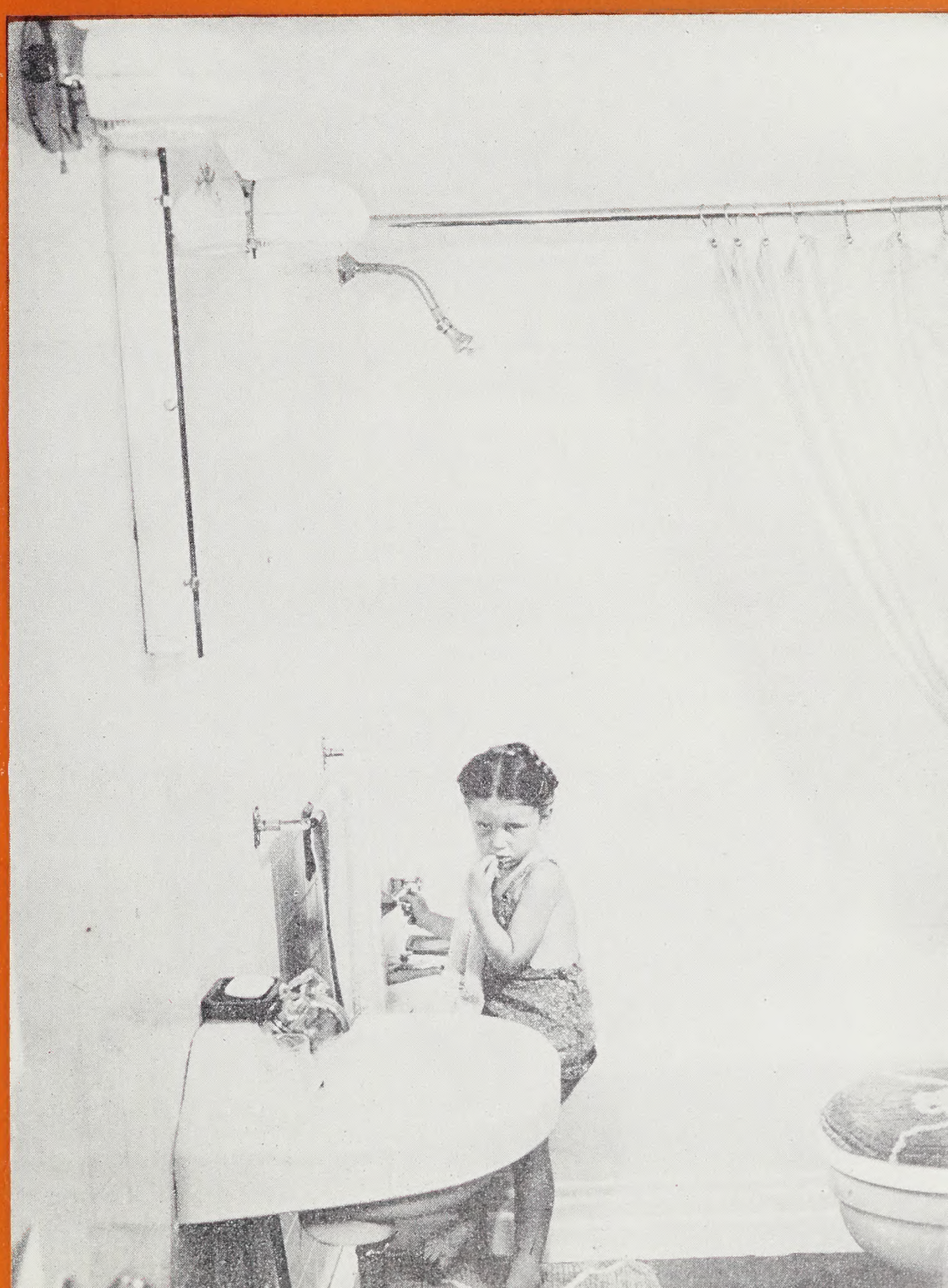

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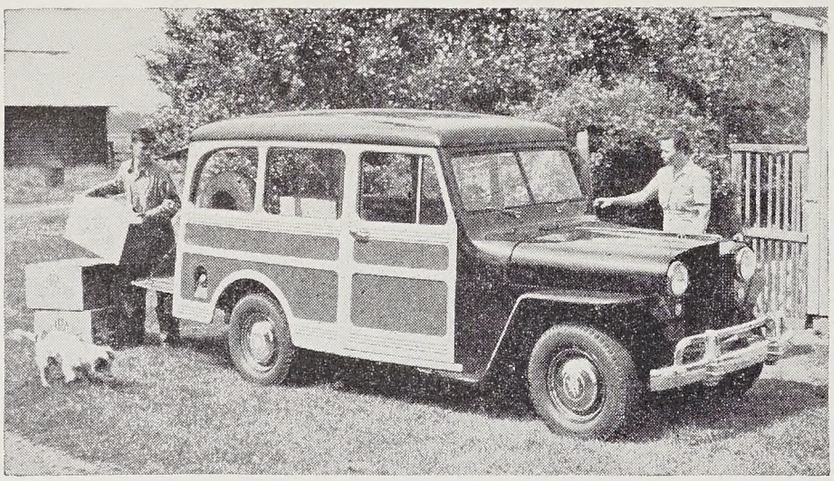

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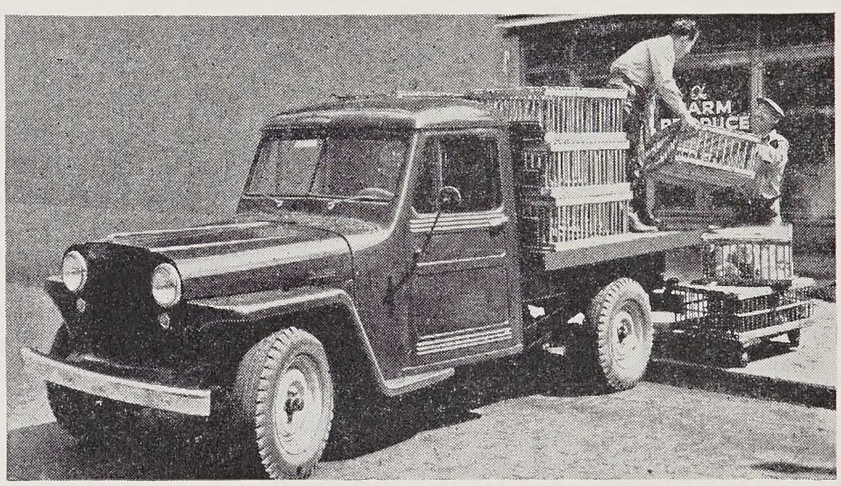

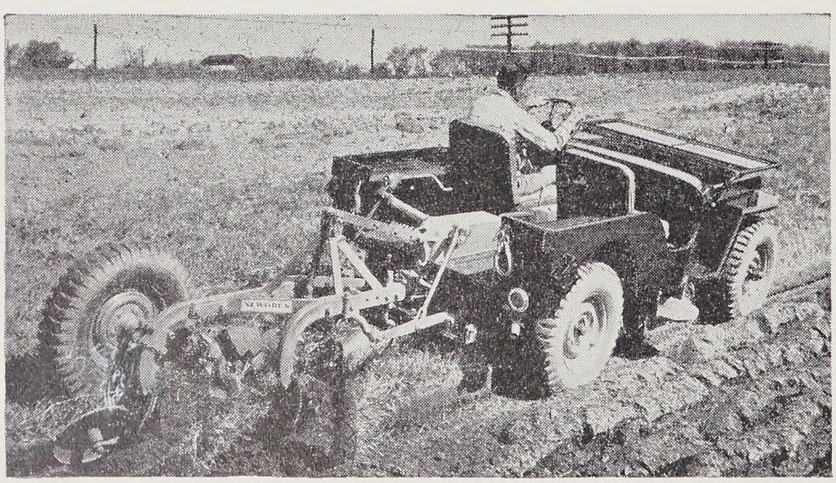

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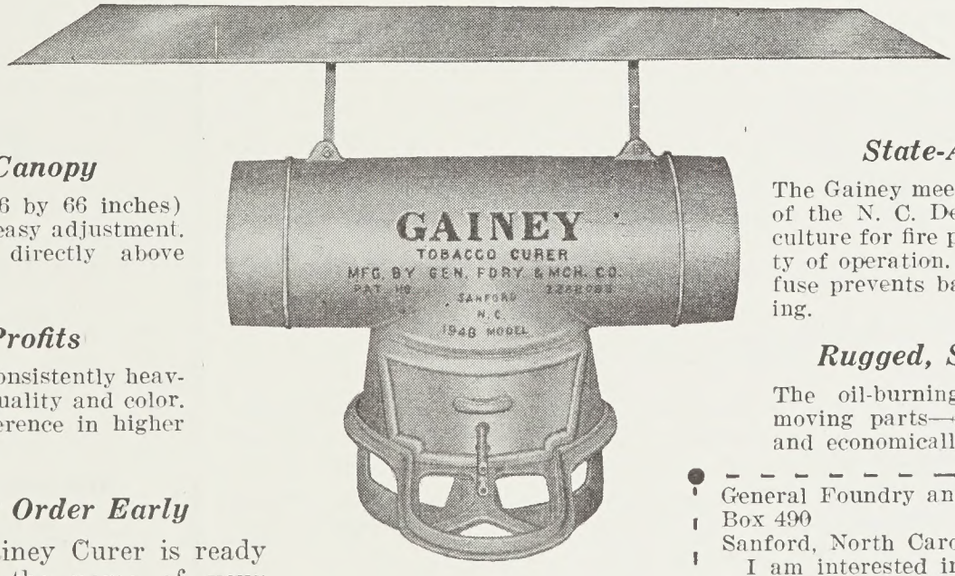

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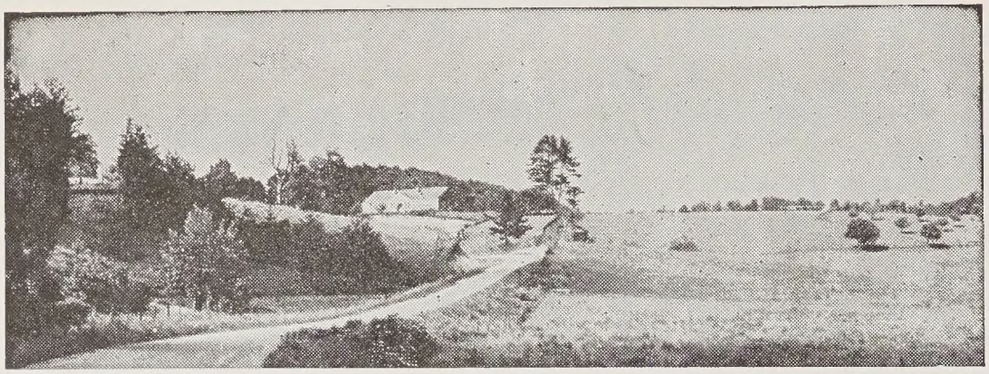

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President and Editor

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National Representative
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OUR FRONT COVER

All the wonderful conveniences of a completely modern bathroom are certainly appreciated by the young lady on our front cover. She is Miss "Kathy" Burgess, whose family is served by the Roanoke Electric Membership Corporation, with headquarters at Rich Square, N. C. With the help of REA power and a little planning, you too can enjoy such a bathroom. Why not contact your REA manager today for information as to the many advantages to be had at moderate cost?

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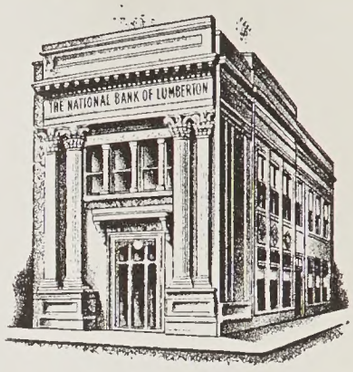

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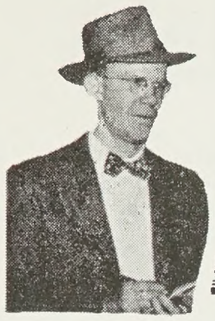


WASHINGTON REPORT

BY WILLIAM S. ROBERTS
Editor, RURAL ELECTRIFICATION
Official Publication of the
National Rural Electric Cooperative Association

THE 81st Congress will certainly build a reputation for getting things done without a lot of delay if it maintains the fast pace it has set during the first six weeks in session. Hearings on both the Agriculture and Interior Appropriations Bills may begin this month. That is 30 to 60 days ahead of the previous two sessions of Congress.

After being bottled up in committee during the previous sessions, the bill of Rep. W. R. Poage (Texas) to amend the REA Act to authorize loans for rural telephone extension and improvement started February 14. REA Administrator Claude R. Wickard and NRECA Executive Manager Clyde T. Ellis pointed out the need for stimulating the building of rural phone lines. Despite stepped up activity by Bell Telephone since the war, the number of farms without telephones is still in the majority.

Poage's Bill calls for REA loans to "finance the improvement, expansion, construction, acquisition and operation" of rural telephone facilities. While priority would be given to cooperative, public and municipal telephone companies, even Bell system companies could get loans if they needed them to provide farmers with telephone service. Actually, it is an accepted opinion that Bell Telephone is able to economically build into rural areas where it serves and does not need the loans. However, the smaller "independents" are located in more rural territory—to an extent that it appears that the independents are in a position to do 50% of the rural job. Yet the independents do not have the pipe line to Wall Street that AT&T does. Thus the Poage Bill appeared necessary in spite of, rather than because of, any action AT&T is taking in rural areas.

Because of the shortage and high price of copper for wire and cable as well as other industrial items, a bill to extend the moratorium on the copper tariff is not expected to run into any trouble in Congress this year. The two year moratorium was voted by Congress in 1947, after the National Rural Electric Cooperative Association opened a demand that the tariff barrier be lifted in view of the then even more critical shortage of copper in the United States.

A Deficiency Appropriations Bill in Congress may offer relief to rural electric systems in the West and South, desperate for additional supplies of wholesale electric power. The principal item in the bills which can help the rural electrics are transmission lines, which will free "captive" low cost Federal hydro power now bottled up by private utility monopoly over transmission facilities. It is particularly true in the Southwest, where the Federal Government has been forced to sell hydro power at "dump" rates to the nearest private utility. Under such arrangements, the farmer has lost millions of dollars, and the utilities have made millions.

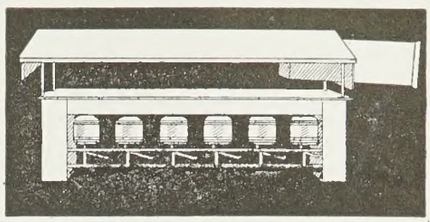
It is the appropriations, labor and similar bills which will benefit from the fast pace the 81st Congress is setting for itself. The vital long range legislation, like valley authorities, may wait until the second session of the 81st Congress next year before they are acted upon. Congressmen and Senators will troop home earlier this year than they have in any year since before the war.

* * *

This fast pace of Congress is not all good. There is one huge block of legislation of far reaching importance which could conceivably be "jammed" through the Congress without careful examination and deliberation. That is the group of reports and recommendations being made by the Commission on Organization of the Executive Branch (commonly known as the Hoover Commission).

Few agencies have a greater stake in any reorganization of the Executive Branch than REA. "Task forces" appointed by Hoover to make studies and recommendations to the Commission have delved deeply into social and economic policy.

While assigned to devize procedures and organization for more efficient government, the task forces have gone as far afield as to set themselves up in opposition to extension of the TVA principle to other river basins, echoed private utility opposition to transmission lines in connecton with Federal hydro projects and even dipped into the matter of farm parative price formulas.



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New Offices and Factory:
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The REA Program in the United States

THE Rural Electrification Administration is an agency of the U. S. Department of Agriculture. It is headed by an Administrator, who is appointed by the President for a 10-year term, confirmed by the Senate, and responsible to the Secretary of Agriculture. The present Administrator is Claude R. Wickard, of Indiana, who took office in July 1945.

Congress first provided for the Federal rural electrification program in the Emergency Relief Appropriation Act of 1935. On May 11, 1935, President Roosevelt established REA by Executive Order. In 1936, Congress authorized a 10-year lending program in the Rural Electrification Act. This time limit was removed by Congress in 1944. Congress annually fixes the amount of funds REA may lend in each fiscal year.

REA encourages rural electrification by making loans to finance electric service to unserved rural people. The agency operates no electric facilities and makes no grants. REA loans are made on a self-liquidating basis and are sufficient to cover the full cost of constructing lines and other electric facilities. The loans bear 2 percent interest and are repaid over a maximum period of 35 years. Rates paid for electricity by REA served consumers are based on the cost of service.

In 1935, when REA was created, few power distribution lines had been built beyond the immediate vicinities of cities and towns. Up to January 1, 1935, only 743,954 farms, or 11 percent of all farms in the nation, had received electric service. Since then, the REA program has greatly accelerated the extension of service into thinly-settled rural areas, and 2,800,000 additional farms had been connected to power lines by July 1, 1947. More than half of the farms receiving electric service since 1935 have been connected to REA-financed lines. The remainder are on lines of other agencies which have been roused to greater rural electrification activity by the REA program. As of July 1, 1948, REA estimated that a total of 4,019,476 farms, or 68.1 percent, were electrified.

About 1,840,000 farms—more than 30 percent—still are unelectrified. Many of these farms are in isolated areas, or in areas of relatively low farm income. As a result, the most difficult part of the rural electrification job still is ahead. However, the REA program has established a pattern that eventually can bring electric service to practically all of the country's unserved farms.

Up to July 31, 1948, REA had approved $1,415,620,261 in loans to 1,039 borrowers, 957 cooperatives, 41 public power districts, 20 other public bodies, and 21 commercial power companies. Some 931 of these borrowers had rural electric facilities in operation. The facilities included 680,374 miles of lines serving more than 2,310,240 farms and other rural consumers in about 2,200 counties of 46 states, Alaska and the Virgin Islands. Additional lines are being built as rapidly as materials can be obtained.

May Named National Water Systems Month

May, 1949, has been named National Water Systems Month.

From now until the end of May, manufacturers and dealers of electric water systems, in cooperation with electrical utilities, will spread from coast to coast the story of the many advantages of running water under pressure on the farm.

Theme of this campaign is "Profit Grows When Water Flows." To the farmer an electric water system means added profit from fatter and more productive stock, better sanitation, and higher living standards. Other advantages are: increased leisure time resulting from the labor-saving factor of electric water systems; greater protection against dreaded fire which annually destroyed more than $100,000,000 worth of farm property and live stock; and all the plumbing conveniences of the large city.

With rural electrification lines branching out into almost every corner of the United States, the benefits of running water under pressure become more and more easily obtained. More than four million U. S. farms are now near enough to electrical lines for the installation of an electric water system and by 1958 the number will be almost six million.

That farmers are eager to own electric water systems is attested by the fact that approximately 745,000 systems were installed in 1947, compared with only 50,000 in 1932.

Of the total loans approved by REA, nearly 90 percent have been for electric distribution facilities. Only a little more than 5 percent have been for generating plants and a little less than 5 percent for transmission lines. REA makes generation and transmission loans only when borrowers are unable to obtain an adequate supply of power or to purchase power at reasonable wholesale rates. About one percent of the total loans approved have been for the installation of wiring, plumbing, and electrical equipment and appliances on consumers' premises.

Through July 31, 1948, REA advanced $972,812,678 as loans to its borrowers. Advances are made under REA loan contracts only as borrowers need funds to pay for construction under way or completed.

Approximately 75 percent of the consumers on REA-financed lines are farms. The rest are non-farm rural homes, schools, churches, stores and other rural establishments, including such rural industries as grain elevators, creameries, woodworking plants, and machinery repair shops.

As of June 30, 1948, REA borrowers had paid $168,297,861 in principal and interest on their government loans. This included $18,937,368 paid on principal in advance of the time it was due. Only $965,967 was more than 30 days overdue. Only one foreclosure has been necessary.

REA had made more than 95 percent of its loans to cooperatives organized under state laws by rural people seeking electric service. These groups are local independent business enterprises. They are controlled by their consumer-members through boards of directors elected annually by and from the membership.

Rural electric cooperatives have proved the most effective instrument for carrying out the REA program because of their advantages as a method of making reasonable- cost electric service available to farmers in thinly-settled rural areas. These advantages include:

1. REA-financed cooperatives operate on a non-profit basis. This enables them to provide electric service at cost to their members.

2. Directors of REA-financed cooperatives are elected because of their known interest in making electric service available to rural people at rea-

(Continued on Page 15)

Year Around Farming

A Farm Program Based on the New Era

By J. H. HILTON
Dean, School of Agriculture and Forestry
N. C. State College

NORTH CAROLINA should continue to grow enough tobacco, cotton and peanuts to maintain its position as third among the states in cash crop income, but it also should round out its agriculture and use its farm labor to better advantage by producing more livestock, feed, truck and other crops. At the same time it needs to press even harder its fight against soil erosion and should begin to reforest several million acres of worn out farm land and cut-over woodlands.

This is the gist of a report recently submitted to Governor Cherry and a group of farmers and agricultural leaders by Dr. J. H. Hilton, dean of the School of Agriculture and Forestry at N. C. State College. Request

DR. J. H. HILTON

for a thorough study of the state's agricultural situation with a view to charting a course for the future grew out of a meeting of farmers and agricultural workers held in the governor's office last November to discuss means of utilizing lands and labor faced with idleness on account of this year's cut in tobacco acreage.

Dr. Hilton's report, however, goes beyond this immediate problem and undertakes to provide "a guide in developing a sound, stable, and more permanent agriculture for our state."

Farmers and other people of the state probably will hear a lot about this report in forthcoming months, for it represents the first step in what very likely will become a long-range agricultural program for North Carolina. Fifty thousand copies of the report are to be printed and distributed and the governor's committee plans to have similar local committees set up in every county in the state to put the program into practice.

"Today our state faces many new and complicated agricultural problems," states a foreword of the Hilton report. "They will be solved only through realistic approach and a willingness on the part of all people to do their part in finding the solutions. This is North Carolina's way of doing things."

The report is divided into three parts: An analysis of North Carolina agriculture and its problems, a suggested program, and recommendations as to "how to get the job done."

One of the big problems considered is means of increasing farm income by using available labor more efficiently. The statement is made that in 1945, when farmers complained of a labor shortage, the labor required on North Carolina farms amounted to 70 million man days while there was an available supply of 113 million man days.

Pointing out that the average farm in North Carolina has only 26.4 acres of crop land, compared with an average for the country of 76.9 acres, the report says that North Carolina farms are too small for efficient operation. It also says there are too many people on the land to afford them full-time employment.

As southern agriculture becomes more mechanized a danger is foreseen of increasing unemployment unless industrial development takes up the slack or farming is rounded out so as to provide more work the year round.

Declaring that our soils and climate are well suited for certain cash crops, the report recommends that North Carolina farmers continue to grow tobacco and even consider increasing their production of cotton and peanuts.

These three crops, it is pointed out, are grown on one-fourth of the state's crop land, leaving three-fourths that is not utilized to provide its maximum revenue to the farmer.

"Much of this land," it is stated, "could be planted to grain, hay and pasture to (1) offer alternatives of feeding or selling and thus reduce risks; (2) supplement local feed supplies; and (3) provide fixed nitrogen and other nutrients essential to maintaining good soil fertility.

Also, it is stated that there are about two million acres of idle and eroding land which should be planted to trees, and that another two million acres of cut-over land should be planted or assisted in natural reseeding. In addition to the erosion control involved, the report points out that

Sources of Cash Farm Receipts, North Carolina, 1946

	Amount	% of Total
CROPS		
Tobacco	$436,761,000	57.1
Cotton	74,090,000	9.7
Peanuts	30,346,000	4.0
Corn	11,134,000	1.5
Small Grain	9,951,000	1.3
Hay	3,063,000	.4
Soybeans	5,496,000	.7
Other	62,553,000	8.2
Sub-total	$633,394,000	82.9
LIVESTOCK AND LIVESTOCK PRODUCTS		
Cattle and Calves	17,940,000	2.3
Hogs	20,527,000	2.7
Sheep and Lambs	276,000	.04
Wool	90,000	.01
Dairy Products	29,574,000	3.9
Poultry	28,936,000	3.8
Eggs	21,771,000	2.8
Other	685,000	.09
Sub-total	$119,799,000	15.6
Government payments	11,211,000	1.5
Grand Total	$764,404,000	100.0

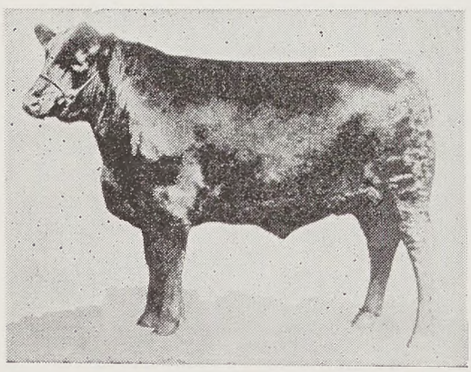
"with reasonable protection from fire, insects, diseases, and from grazing in the Piedmont and mountain sections, farm woods will produce an average stumpage income of $3 per acre per year. The harvesting and marketing of forest products will provide a labor income of $12 per acre."

In certain areas, special fruit and vegetable crops offer additional cash-income opportunities, and provide a means of more fully utilizing both land and labor resources.

"Such horticultural crops are confined to soil, climate, and market conditions which are most conducive to profitable production," the report states, and points out, by way of illustration, that "there is no indication that the acreage of early commercial Irish potatoes in Eastern North Carolina can be profitably increased unless considerable improvement is made in quality and in the handling and marketing of these potatoes," but that "the expansion of the sweet potato industry holds more promise."

Other suggested crops are strawberries, which require large amounts of hand labor, and truck crops such as lettuce, snap beans, sweet corn and cabbage. However, the report warns that "for the most part, perishable commercial truck crop production must remain with those farmers having more than average experience and ability to grow and market these crops. Any increase in acreage of truck crops should take place in areas which now have markets or be concentrated to an extent sufficient to justify the development of adequate markets."

The advantages of increased livestock production are discussed in the report. "Livestock returns plant nutrients to the soil. It also provides



An example of good breeding

a means of selling forage crops from much land that would otherwise remain idle. Since the labor requirements for caring for livestock are more evenly distributed throughout the year, this enterprise would help solve the unemployment problem."

Good bulls from such herds as this one used on native cows will aid materially in building a commercial cattle industry in North Carolina.

Recommendations are made for the selection of livestock best suited to the individual farm conditions. For instance, it is pointed out that "poultry needs little land; dairying requires more labor; hogs require more grain and less roughage than other particularly recommended for some sections of Eastern North Carolina; poultry and beef for the tobacco belts. A need for increased production of eggs and dairy products for home consumption is stressed.

The need for fuller utilization of available farm labor is discussed throughout the report, and is taken into consideration in most of the recommendations. "There are too many people on the land to afford them full-time employment. There is an average of less than 20 acres of cropland per farm worker in the state. The average for the United States is 54." Other factors in this problem, it is stated, include the fact that many farms in the state are too small for efficient operation and that most farms are not efficiently organized so as to fully utilize the land and labor.

"The operating capital per farm worker in North Carolina in 1945 was only $558. The corresponding figure for the United States is $1,267." A comparable deficiency in machinery, tools, land, buildings, and livestock is indicated: "Under present conditions, labor is the largest single item the farmer has to sell." The further complication of seasonal labor shortages is discussed, occasioned by the requirements for most crops grown in the state, while at other times many farm workers are idle. "For example, an acre of tobacco requires about 40 days of man labor, but most of this is required during the harvesting season, leaving the farmer very little to do on tobacco for several months out of the year."

One of the suggested solutions to the labor problem is the establishment of more industries of the kind which will supplement rather than compete with farming, and provide additional markets for agricultural raw materials. Examples cited are grain drying, cleaning and storing facilities; expansion of the garment-making industry, utilizing cotton grown in the state; industries using such raw materials as soybeans, peanuts and sweet potatoes; canning plants; dehydration plants for forage crops; and dairy products plants.

Voluntary cooperative effort is the suggested means for putting the program into effect. Attention is called to the need for selling the program to the individual farmer, after a decision has been reached as to the desirable over-all plan or pattern. Some of the ways suggested are the use of more demonstrations, tours and exhibits; more effective articles in newspapers and farm magazines; radio programs; and short courses.

The need for more fundamental research on the various agricultural problems is not overlooked in the report. "More basic information on plant diseases, soil fertility, animal

(Continued on Page 16)

We Can Grow Legumes in Acid Soils

By WILLIAM A. ALBRECHT

Reprinted from November 10, 1947, Issue of Hoard's Dairyman, Fort Atkinson, Wisconsin

LEGUMES are almost an indispensable forage for the dairyman. They are high producers of his raw proteins, or the amino acids from which his cows produce the milk proteins. Legumes can use, both from the soil humus and from the atmosphere, the nitrogen that characterizes the chemical composition of these life-carrying substances. But unfortunately legumes are feed crops not grown so universally. We have ascribed their failure to the acidity of the soil. Whether this diagnosis of the trouble is correct may be questioned. It deserves reconsideration in the light of our better understanding of the soil and its interactions with the plants.

Soil Acidity is a Deficiency of Fertility

Acidity is a common soil condition in many parts of the temperate zone. It occurs where the rainfall gives water enough to go down through and to wash out much of the fertility. In general, if the rainfall is high enough to provide plenty of water during the crop-growing season, there will also be enough water to leach the soil of much of its supply of nutrients and to make it acid.

Timbered soils of the eastern United States are acid. Those of the eastern edge of the prairie are also sour. Acidity is a natural condition where soils have had rainfall going down through them and where they have been growing much vegetation. Such soils have, therefore, been subjected to a leaching force taking the fertility downward, and to a competitive force of the vegetation with its roots taking the nutrients upward. There they are built into organic combinations of them. Consequently acid soils have a distinct surface soil and subsoil horizons in their profiles. They are naturally low in fertility and have been growing mainly carbonaceous or woody vegetation.

Natural soil acidity is in reality, then, mainly a shortage of fertility in terms of many plant nutrients. This is the situation because the soil has been under cropping and leaching for ages. This was true before we took over to intensify these effects. This, then, is the condition of the soil that prompts the common question. How can we grow mineral-rich, fertility-consuming forages, like the legumes, of good feed values for such a high-powered, protein-producer like the dairy cow?

Liming the Soil is an Old Agricultural Art

Applications of limestone, and other compounds carrying the nutrient calcium, to acid soils are known widely to be beneficial soil treatments for legumes and other crops. This was known even to the Romans who used lime as a fertilizer on their soils. Much later in general, but yet early in our own colonial history, it was reported that Benjamin Franklin used gysum or land plaster on clover with good improvement of this legume crop. Here right on our own soils the ancient agricultural art of liming the land was practiced for the benefit of better crops as feed. Here the sulfate of lime, or gypsum, which does not take away the acidity of the soil was making better clover. We have forgotten this unusual wisdom about soils among the many bright ideas that came down to us from this colonial sage. We may well go back and look carefully and critically into it now. We need to ask ourselves, "Why can't we grow legumes on acid soils when Franklin grew them better by putting on calcium sulfate?" This was a soil treatment that not only failed to reduce the soil acidity but even made the soil more sour.

Alfalfa and clovers fail, not because a soil is sour but because the fertility has leached away. Liming alone will not cure a sick soil. In fact, overliming may do more harm than good. Our soils need a well balanced supply of all plant food elements to remain productive.

A Little Science Led Us Astray

It was the growing agricultural science of the early decades of the twentieth century that brought liming of the soil back as a more general agricultural practice. We cannot say that liming was an art carried over from colonial days. It had been pushed out when fertilizers came into use. Liming the soil has become an extensive practice under the encouragement of an embryo soil-testing service. That service was guided by the belief that the applications, (a) of limestone which is a carbonate of calcium, (b) of hydrated lime which is an alkaline calcium hydrofide, or (c) of quicklime, caustic oxide of calcium, are all beneficial for crop growth because each of these is ammunition in the fight against soil acidity, or against the high concentration of hydrogen in the soil.

This struggle to drive the hydrogen ion, or acidity, out of the soil was aided by the technological advancements giving us instruments and equipments that measured the hydrogen ion to a finer degree than known before. The ease and speed with which soil acidity could be detected and measured encouraged the widespread testing of soils. This activity discovered soil acidity almost everywhere. Through the help of the measuring gadgets we were impressed by the apparent universality of soil acidity. Only a few humid soils were not seriously stocked with acid. We discovered that for acid soils, in general, the productivity was lower as the degree of acidity was higher. From such a discovery we might expect ourselves to conclude—even though it was later found to be the wrong conclusion—that the presence of the large amount of hydrogen ions in the soil was the cause of the poor crops. This conclusion would be expected also from the bigger troubles in growing the proteinaceous, mineral-rich legumes of higher feeding values.

The extensive use of limestone in the corn belt has now multiplied itself into the millions of tons of these natural rock fragments that are annually mixed through the soil. This increased use was prompted by the beliefs (a) that limestone is beneficial because its carbonate removes the acidity of the soil, and (b) that soil is most productive if it is neutral, or when it has no active hydrogen ions in it. Under these beliefs (now known to be poorly founded) we have become belligerent foes of soil acidity.

Limestone has become the ammunition for fighting this enemy hidden in the soil. Under national financial aid we have been prone to believe that in putting limestone on the soil we can follow the old adage which says "If a little is good, more will be better." We are just now coming around to a better understanding of how Nature grew crops on the acid soils before we did. We are now beginning to understand what limestone really does when it makes better crops.

More Science Shows Limestone Feeds Crops While It Fights Soil Acidity

Only recently have we recognized the fallacious reasoning behind the conclusion that it must be the presence of the acidity in the soil that brings the crop failure when liming lessens the soil acidity and makes better crops at the same time. While the convenience of soil testing gadgets encouraged this erroneous belief about soil acidity as an enemy, it was the diligent study of the physiology of the plants, of the colloidal behavior of the clays growing them, and the chemical analyses of all these, that finally pointed out that soil acidity is not detrimental, but is in reality beneficial.

We now know, of course, that in applying the limestone, which is calcium carbonate, there is possibly some reduction of acidity by the carbonate portion. At the same time there is being applied also some calcium—a nutrient highly deficient in the leached soils—to nourish the calcium-starved crops. This nutritional service comes about both directly and indirectly. We have finally learned that it is this better nourishment of the crop rather than any change in the degree of acidity of the soil that gives us the bigger and better crops. Unwittingly we have been fertilizing the crops with calcium while fighting the soil acidity with the carbonate, the hydroxide, or the oxide of lime.

In spite of our ignorance of how the lime functions. we have benefited by using it. However, an erroneous understanding of what happens to the crop and to the soil when we lime cannot successfully lead us very far into the future. We cannot continue to grow better feeds under the mistaken belief that we do so merely by the removal of the soil acidity through the use of plenty of carbonates on our humid soils. Wise management of the soil to grow nutritious feeds can scarcely be well founded on facts so few and so simple.

Should you decide to demonstrate for yourself the truth of what has been said above, you can apply some soda-lime, or sodium carbonate to the acid soil. This will reduce its acidity. But unfortunately for you if you are a foe of soil acidity, this soil treatment will rout the enemy but will still not give successful crops. Merely removing the acidity by a carbonate (of sodium rather than of calcium, in this case) does not guarantee the crop.

As proof that it is the calcium as plant nourishment that is the helpful factor in liming, one can repeat Benjamin Franklin's demonstration and apply calcium sulfate to the soil. One might even apply some "Dow Flake," a calcium chloride. Either of these calcium-carrying compounds will make the soil more acid. But in spite of this fact and because they add calcium, the gypsum and "Dow Flake" will improve the crops on the initially acid soil left so. We are now resurrecting the ancient art used by Benjamin Franklin for whom liming the soil was a matter of fertilizing it with calcium (and sulfur) and not one of fighting soil acidity.

Neutral Soils Are Not Necessarily Productive

While we were fighting soil acidity we have failed to notice that most of the populations of the world are concentrated on the acid soils. They are not in the humid tropics where the soils are not acid. Nor are they on the arid soils that are alkaline, a reaction opposite the acid. Soils that are not acid are not necessarily the supporters of many peoples. Yet in fighting soil acidity we labor under the belief that if a soil were limed to the point of driving out all the acidity, such a soil should be highly productive.

We now know that even while a soil may be holding considerable acidity or hydrogen, it is also holding considerable calcium or lime. To a small extent of its exchange capacity, it is also holding nutrients other than calcium. Among these are potassium, magnesium, manganese, and others. But these in total are held in much less quantity and by less force than are either the calcium or the hydrogen, the former a nutrient and the latter a non-nutrient. Should we put on lime or calcium enough to drive all the acidity out of the soil by putting calcium in place of hydrogen, all the other nutrients would be more readily driven out than would this acid-giving element.

Liming the soil heavily, then, does not necessarily drive out only the acidity. Instead it would also drive out all other fertility. It might load the soil with calcium so completely that it could offer only calcium as plant nourishment. Plants would then starve for other nutrients even though on a neutral soil. Plants on such a nonacid but calcium-saturated soil would be starving for all the same nutrients, except calcium, as they do on the acid soils. Making soils neutral by saturating them with calcium does not therefore make them productive. This is the situation of some of the semi-arid soils of our western states. In our struggle against soil acidity we need to remember that neutral soils are not the productive soils. Instead it is the acid but yet fertile ones that feed us and nourish the major portion of the other peoples of the world.

Acid Soils May Need More Than Lime

Calcium has been a good fertilizer for legumes on acid soils now for some years. It has been serving directly as a nutrient for the plants. But it has also served indirectly by helping other nutrients get into the plant roots more abundantly. It helps the nitrogen of the acid to get into the plant. It helps the phosphorus, the potassium, and other nourishing elements to be taken more readily by the crop. A plant grown for a short time on a lime-rich soil and transplanted to one low in calcium—that is, one that is acid—will take more nutrients from such a soil than will the plant that was starved in its early life for lime. It is because of this behavior of the calcium that a limed soil is soon in need of other nutrients beside the calcium.

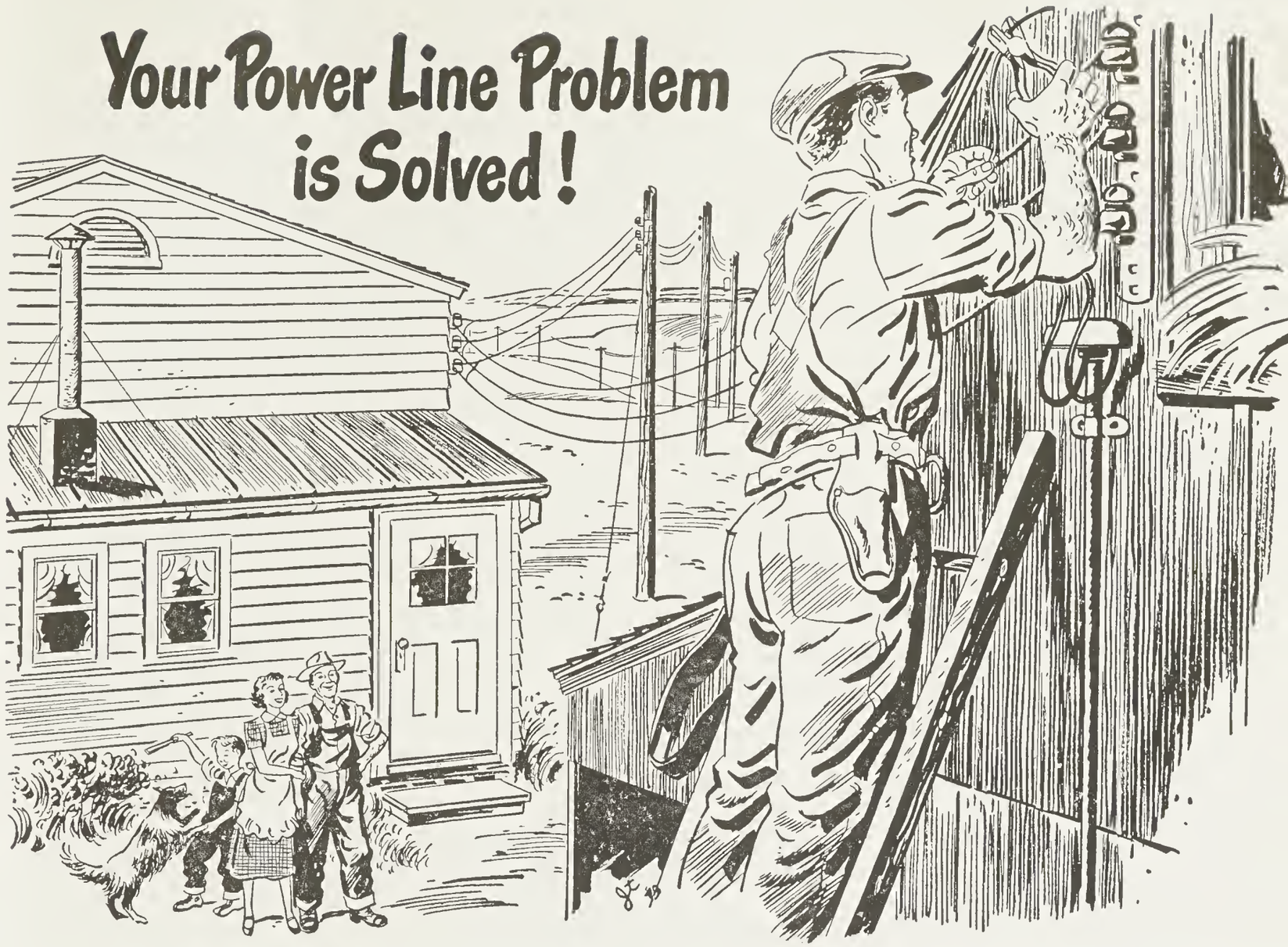
We are discovering rapidly that there is need now for potassium on many recently limed but still acid soils. Other soils in similar condition show their serious needs for nitrogen. Lime, of course, may well be the first fertilizer needed. But when once this need is met on these soils that were highly leached long ago, the need for other nutrients may be quickly evident. Perhaps it is these fundamental soil facts that are bringing fertilizers into such prominence in the corn belt today, while only a few years ago limestone was the only soil treatment and the one starting then its extension into the widespread use it has today. Perhaps these are the facts behind the age-old rhyme that told us long go that "lime and time without manure, make father rich but son poor."

Better Nourishment

We now know that instead of saying that acidity has come into our soils we should say the soil fertility has gone out. Legumes which make good feed for milk producing animals must have fertile but yet acid soils

(Continued on Page 14)

Your Power Line Problem is Solved!



ALUMINUM CABLE BOTTLENECK BROKEN!

Here's important news for both the unelectrified members of cooperatives as well as those plagued with low voltage problems. The aluminum cable bottleneck has been broken. Your cooperative can speed up its power line extension and "heavying-up" program soon, if it acts NOW!

Through a plan initiated by the Reynolds Metals Company and Wisconsin Electric Cooperative, REA-Financed Systems are assured of ample and continuous cable supply to meet both present and future needs. Limited shipments of aluminum cable will start in 90 days, increasing to maximum quantities called for in the contract within ten months. Schedules call for delivery of 225 million pounds during 1950, 1951, and 1952—enough to end the shortage that has existed since the war.

EVERY COOPERATIVE AND POWER DISTRICT CAN SHARE THE BENEFITS!

Here's how your cooperative or power district can obtain its share of aluminum cable for continuing its new-line construction and "heavying-up" projects. Place your order, immediately, for your next three years' requirements with Wisconsin Electric Cooperative for the aluminum conductor and accessories needed. The prices to REA Systems are guaranteed and are not on the basis of "subject to change without notice". Full details concerning placement of these orders have been furnished your cooperative's manager.

Wisconsin Electric Cooperative is distributing this aluminum cable on a service-at-cost, non-profit basis. All savings realized in the distribution of this product will be returned to the patron cooperatives.

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.. The Carolina Homemaker ..

By **MISS YORK KIKER,** ***Home Economist***

Suggestions for Buffet Suppers

Everybody loves a party. Delicious food attractively served, good conversation, and a competent hostess are the best ingredients for a successful dinner party.

When you invite a group of your friends for dinner, why not plan to serve it buffet style? Simple and easy to arrange, a buffet will give you and your husband more time with your guests; you will discover that even a hostess can enjoy her own parties.

Plan and work ahead so that the day of the dinner you will be in a party mood. Select dishes that can be prepared in advance. Check your silver and be certain that it is clean and free from the tarnish that robs sterling of its gleam and lustre. Decide on the type of linens and china that you are going to use. Make it a festive table. Use greens or flowers in season, tall candles and perhaps small favors, one for each guest. Fold the napkins within easy reach of the silver on the large table.

Two easy dishes especially appropriate to Lenton buffets are "Hurry-Up Salmon Croustades" and "Salmon Newburg."

CROUSTADES

Croustades are toasted bread cases used for serving creamed foods. To make croustades:

12 slices day-old bread
¼ cup melted butter

With 3" round cutter, cut out circles from slices of bread. Then using a 1½" cutter, remove centers from 6 of the circles. Place cut circles, one each, atop the plain rounds and place on cookie sheet, along with tiny rounds to be used as covers. Brush sides and tops lightly with melted butter. Brown in a hot oven.

HURRY-UP SALMON CROUSTADES

1 16-oz. can salmon
1 can cream of mushroom soup
½ cup milk
½ cup cooked or canned peas

Drain salmon and remove bones and skins. Break into coarse pieces. Heat mushroom soup with milk, add peas and salmon. Cook until salmon and peas are heated through. Fill croustades and place cover on top.

SALMON NEWBERG

1 16-oz. can salmon
½ cup cooked or canned peas
1½ cups medium cream sauce
2 egg yolks, slightly beaten

Drain salmon, remove bones and skin. Break into coarse pieces. Combine egg yolks and white sauce, stirring constantly. Add salmon and peas to cream sauce. Cook until salmon and peas are heated through, but do not boil. Fill croustades and place cover on top.

FOUNDATION FOR GOOD COOKING

Many a housewife has an eager interest in collecting new recipes. Some surveys indicate that the average housewife is more interested in new recipes than in the basic principles of cookery—or the foundation recipes developed from them. Yet a knowledge of these relatively few foundations may make her a better cook than a whole library of cookbooks and recipe clippings, cookery scientists of the U. S. Department of Agriculture suggest.

Any cook with imagination can develop innumerable new dishes from the simple basic recipes without leaning heavily on cookbooks, helpful as these may be in suggestion variations. In feeding the family on a budget, where skillful use of all leftovers is important, cookbooks may be less helpful than the cook's own knowledge of how to use what she has according to good cookery principles. Even if she takes time to leaf through all her books, she may not find a recipe that just fits that half cup of meat, bit of cheese or other leftover on hand.

From the simple basic recipe for white sauce, hundreds of "new" sauces have been developed, any of which may help in stretching foods or using leftovers. Add to this basic sauce chopped hard-cooked eggs and a little lemon juice for an egg sauce for fish. Put in chopped green pepper, onion or parsley for extra color or flavor. Add cheese to the white sauce for a cheese sauce. In place of some of the fat in the recipe, use peanut butter for a peanut flavored sauce. All the variations go back to the simple principles of combining and cooking fat, flour and liquid into a smooth sauce of the right thickness.

Again, a vast number of hot breads have come from the standard recipe for baking powder biscuits. Add to that recipe chopped nuts, grated cheese, grated orange rind, egg or a little sweetening—and there's a different biscuit for the family.

"Once familiar with the basic principles of recipes, you are set to take it from there," the cookery scientists say.

EASY WAYS

Have you ever thought of these easy ways to do odd jobs around the house? If you are not already making use of these ideas, you will want to try them soon.

When putting new elastic in a garment, pin the end of the new to the worn elastic.

HURRY-UP SALMON CROUSTADES
—Courtesy of Heirloom Sterling, Damask Rose Pattern

Then as the worn elastic pulls out, the new elastic will pull in.

Keep a stiff brush near the laundry tubs. Before putting garments into the wash, turn any pockets inside out and brush thoroughly. The brush will be handy also for brushing soapsuds on especially soiled places, such as neckbands, collars and cuffs.

The finger of an old glove or a thimble placed over the end of a curtain rod, helps the curtain slip onto the rod easily without catching or tearing.

To paint a stairway which must be used while the paint is drying, paint every other step. Then when the first set of steps is dry, the alternate steps may be painted.

When packing cake in waxed paper, sprinkle the paper with powdered sugar first. This helps the frosting to stick to the cake and not to the paper.

Stick a piece of adhesive tape on the walls before putting in tacks to hold pictures. This helps prevent the tack from cracking the plaster.

Wax applied to the dust pan helps dust slide off easily; to the tops and bottoms of drawers, helps prevent sticking; to the painted surface of washing machines, helps prevest rust.

GOAL FOR NUTRITION

Nutrition research is showing far-reaching reasons for mankind to strive to be really well fed. More abundant health and a longer prime of life are in the offing, not to be realized fully in one generation, or even two, but held out as possibilities on which we can start working.

Explaining some of the important possibilities, Dr. Hazel K. Stiebeling, Chief of the Bureau of Human Nutrition and Home Economics, U. S. Department of Agriculture says:

"It is increasingly clear that, beyond the benefits of being just passably well nourished, there are benefits to be had from still more favorable or optimal nutrition.

"One line of evidence comes from long-time feeding experiments with generations of animals conducted by Dr. Henry C. Sherman of Columbia University. He has explored the zone between passable and more optimal amounts of calcium, vitamin A, and riboflavin in diet, using milk as a source. Some of these studies covered a time which in human generations would correspond to the period from the days of the Caesars until now.

"Given very liberal amounts of milk in diet, these animals improved in vigor until, after several generations, a family line showed several benefits that liberal amounts of these nutrients could give. These well-fed descendants of well-fed ancestors lived 10 percent longer. What is more important — adulthood was achieved earlier and signs of old age were deferred so that the prime of life was increased by much more than 10 percent.

"If a man's period of greatest productivity could be lengthened by an average of seven years, society, as well as the individual, would greatly profit. Modern professional groups, for example, spend so many years preparing for a career and proving themselves that most individuals seem to be 40 to 50 years old before they are entrusted with their highest opportunities.

"Dr. Sherman's research indicates that two to four times the minimum needs of calcium, vitamin A, and riboflavin in diets otherwise adequate are better in the long run than barely enough to these nutrients to get by. Barley enough in daily food perhaps is provided by 300 to 350 calories daily from milk and non-starchy vegetables and fruits. In the 1930's, in countries where the national supplies of these foods were below this marginal level, tuberculosis took more lives, more babies died, and life expectancy in general was shortened.

"Dr. Sherman's controlled laboratory work coupled with human experience gives us added confidence in this country in recommending increased consumption of milk, leafy green and yellow vegetables, and vitamin C-rich fruits."

Washable crepe gloves on Miss Ann Hermann are given high style by the addition of Wright's fluted all lace with ribbon-run beading.

Suede cloth gauntlets in foreground are made distinctive by Wright's box pleated rayon taffeta plaid ruffling. The same trimming is used effectively on the rayon satin ascot.

Miss Hermann also takes the opportunity to show a pretty yoke of chalk blue ninon edged with crystal pleated ninon with gold thread scalloped edge, another new Wright creation.

Tip to Housewives on Buying New Plumbing Fixtures

A worthwhile bargain is in store for the alert housewife who is planning to remodel her kitchen or bathroom or build a new home. According to the Porcelain Enamel Insttiute, all steel plumbing fixtures made by its member companies are supplied in "stainproof" porcelain enamel —which means the permanent end to the bug-a-boo of stained sinks, bathtubs and lavatories—at no extra cost. Steel plumbing fixtures are the only fixtures which provides stainproof porcelain enamel as a regular feature rather than an "extra" supplied at additional cost.

This relatively new type of porcelain enamel being used by all manufacturers of steel plumbing fixtures withstands the action of acids. We seldom think about having acids in the home, but tomatoes, lemons and other common foods contain acids which attack ordinary or regular quality porcelain enamel finishes and actually eat away the gloss, making them extremely hard to clean. The new stainproof porcelain enamel is safe from damage from anything you use either in your kitchen, bathroom or powder room and it will retain its beautiful finish for a lifetime.

We learned, too, in talking with building contractors, that porcelain enameled steel plumbing fixtures are becoming increasingly popular because they weigh so much less than other types. They find that these lightweight, but stronger fixtures offer quality features that appeal to prospective home builders and modernizers.

Lift Up Your Heart

"I will lift up mine eyes unto the hills . . ." Ps. 121:1. (Read Ps. 121.)

Rev. J. H. Jowett in his Yale lectures on "Preaching" tells of visiting a cobbler in Wales and asking if he did not feel cramped in his very small quarters. "No," said the man. Then he bade the preacher follow him to a window that opened toward the sea. "When I feel tired and cramped, I look through that window and it steadies me." His little room suggested world horizons.

Is not that the trouble with most of us—that we live in too small a world? We take our place in life's noisy workshop or fill a small corner somewhere, yet how greatly we need a window to remind us of far-off things! Sunday comes and the church helps to open those windows for us. For a little while, we ponder such ideas as God, our duty, immortality and our destiny.

But the Hebrew Psalmist lifted up his eyes each day to the hills. Common tasks are not to tether us to low levels, where our vision is narrowed.

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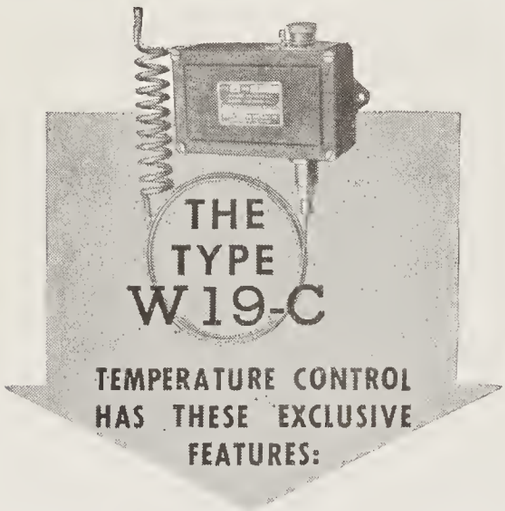

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The new Type W Thermostat is available for use on existing power operated coal or oil burning curers as well as for inclusion as original equipment on new burners. It operates on either 110-125 V AC or 220-250 V AC. A proven control, the Type W is widely used by industry to control laboratory ovens, incubators and hot plate presses.

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Farmers Take Long Look At 1949

By **IRA MILLER**

What should the farmer do with his boom time profits? Invest in more land, put his excess cash in the bank or spend it to raise his family's standard of living? These questions are uppermost in the minds of many farm families as they take a long, penetrating look into 1949.

For most of them, 1948 was a great year. Collectively, they had an estimated gross income of about $41,200,000,000—the highest on record. Unless all studies

WHILE THEY WORK—Farmers are planning for 1949.

go astray, it will be $1,600,000,000 more than in 1947. Farmers, as a class, are "in the money." And here's what the experts have to say about the situation:

"Many farm people of the United States are in better financial condition than they ever have been. Their indebtedness is greatly reduced and their incomes lately have been high. From their standpoint, it makes sense to spend the extra cash for convenience, comfort and shorter working hours."

The Agricultural Committee on National Policy advises the farmer to fix up the home place, improve the house as well as the barn and give mother, the children and himself a break.

By nature, farmers are hard working people. They have to be. For farming is a hard job. But it has been growing increasingly easier in recent years. Considerable credit for this "easing" of farm work belongs to electricity. The coming of the highline has worked wonders, for it has brought to the farm a tireless "extra hired hand" who performs scores of production and household chores, with manual effort reduced to flicking a switch. Electricity, however, still isn't being used to anything like a maximum extent. For example, only 38% of our farm homes had running water as of 1947, while just 20% had bathrooms. In a production way, many farmers still milk by hand and hoist hay with the aid of an unhurried team or expensive tractor power.

Yes, scores of farmers still have a long road to travel before their farmsteads are equal, in a modernization way, to the incomparable beauty of all outdoors which, to a great extent, is their workroom. However, 1949 is another year. And if farm families follow the counsel of their leaders, traditional rural living and working habits are due for a change. Leisure will be mixed well with work, for time and labor saving devices will be installed to take over many tedious chores. And the farm home will emerge as convenient as that "house in town" which mother wants when it comes time for dad to retire.

We Can Grow Legumes On Acid Soils

(Continued from Page 10)

wrom which to make the feed that will be good. Lime is one of the foremost fertilizers in making soils capable of supporting the protein producing crops. For this service to plants, phosphorus is also needed. Then, too, a plant needs potassium to make the carbohydrates from which the proteins can be constructed through the help of these soil-borne nutrients. Not only one element but many nutrient elements are needed. These are taken out of the soil as the plant trades hydrogen as acid for them. Consequently the highly acid soil is simply one that has become deficient in fertility.

We can grow legume crops on acid soils if we will give them calcium and all the other fertilizers needed by the soil to grow them. Red clover was commonly said to be sensitive to acid soils. Yet liming the millions of acres has not restored this crop to those extensive arcas. The high cost of its seed is sufficient testimony of the crop's scarcity today. This crop usually needs potassium, or phosphorus, or possibly other fertility elements on a soil deficient to the point of being naturally very acid. Then, too, when a soil is properly fertilized, red clover will grow even if the soil is highly acid. We now know that the soil acid-

ity is not the problem in growing the legumes. The production of these protein production crops is a matter of ample soil fertility among which the calcium is only one nutrient. If we provide this one by means of limestone and then add all the other necessary fertilizer nutrients for the soil in question, we can grow legumes of highly nutritious values as feed without removing all of the soil acidity. Growing legumes is a matter of feeding these crops, and not a matter of fighting soil acidity.

Soybeans came in as a "new" legume crop. They were reported to "grow on acid soils." But on such soils they were also reported to be "a hay crop and not a seed crop." We did not realize that if they were not building proteins and other complexes demanding soil fertility to make a seed crop and that consequently they could not be a nutritious hay in these respects. Soybeans need lime, too, if they are to give good feed. They are showing growth troubles when the soils are not well supplied with magnesium. They are also reporting the need for manganese on some soils. Soybeans can be grown on an acid soil that is fertile in more respects than in calcium only.

We need no longer hunt for "acid-tolerant" legumes. Any plant that is well nourished tolerates acidity. It causes the soil to become acid when it takes the fertility from it. The root itself is acid and makes the surrounding soil area acid by the carbonic acid it respires. It is this carbonic acid by which the plant carries on the business of taking calcium, potassium, magnesium, phosphorus, iron, and its whole array of nutrients from the soil. It trades hydrogen or acid for them. Acidity is therefore "natural" for any plant.

Growing legumes is not a problem of getting rid of the acidity of the soil. On the soils where we say acidity is a problem, the problem is one of putting in place of the acidity the list of plant nutrients lost excessively from the soil as it became acid. Legumes that make tons of vegetative mass on so-called "acid" soils do not make the nutrient values or quality of feeds made by those other legumes we say are "failing" on acid soils. We can grow some legumes on naturally acid soils but they will not be the equal in feed value of those on soils once naturally acid soils but given other fertility as well as some calcium in the belief that it was removing acidity. Good feed can be grown on acid soils provided that they are given the fertility required by the plant to manufacture it.

THE R. E. A. PROGRAM IN THE UNITED STATES

(Continued from Page 6)

sonable rates. They serve without compensation and keep operating expense at the lowest possible level consistent with good service.

3. Members of REA-financed cooperatives also are interested in electric service at reasonable cost. For example, they help reduce operating expense by voluntarily reporting potential causes of service interruptions such as tree limbs touching the lines. Most of them read their own meters and make out their own bills.

4. Previous experience of farmers with other types of cooperatives helps them to organize and operate rural electric cooperatives on a sound basis with a minimum of effort and expense.

REA-financed cooperatives and other REA borrowers build lines to serve less densely settled sections along with those of greater population. This is known as "area coverage" and enables REA borrowers to extend electric service to all persons in given rural areas at reasonable rural rates.

Area coverage has become increasingly important as the Nation starts on the last part of its rural electrification job. A substantial number of more isolated unelectrified farms can be reached only through area coverage. Others are in so-called "pocketed" areas which can be reached only by extensions from existing systems, or which are remote from any established source of power.

REA and its borrowers encourage farmers to use electrical devices to increase farm income and production. In recent years, the experience of farmers on REA-financed lines has shown that electrical farm equipment is an economic necessity that can more than pay its own way. Electric power now plays an increasingly important part in farm production and processing, and a variety of new electrical farm equipment is being developed. About 400 different farm uses for electricity have been reported.

In the State of North Carolina, shortly before REA was established in May, 1935, only 9,672 farms, or 3.2 percent, had received central station electric service. REA estimated that on July 1, 1947 196,445 farms, or 68.3 per cent of all farms in the State, were served.

The first REA loan in North Carolina was approved in September 1935, and the first REA-financed line was put in operation in the State on May 18, 1936 by the Tidewater Power Company. As of July 31, 1948, REA had approved $48,229,552 in loans in the State to 39 borrowers—including 36 cooperatives. The loans will enable the borrowers to finance 29,523 miles of lines and other rural electric facilities to serve 115,086 rural consumers.

The average monthly farm consumption of electricity on North Carolina's REA-financed lines has increased from 37 kilowatt-hours in December, 1941, to 63 kilowatt-hours in December 1947. This increase reflects greater use of electrical equipment to save time and labor in performing farm and household tasks and to help obtain a more comfortable rural living.

WELCOME

This issue of THE CAROLINA FARMER is being mailed for the first time to the nearly 2,000 members of the Central Electric Membership Cooperative with headquarters at Sanford, North Carolina.

We wish to extend a hearty welcome to these cooperative farm families as they join our increasing list of REA consumers.

Rose's 5-10-25¢ Stores, Inc.

A Southern Company by Southern Men

OPERATING 126 STORES
IN FIVE SOUTHERN STATES

You Are Dealing With Home People When You Trade at

ROSE'S 5-10-25c STORES

LET FREEDOM RING!

Artist concept of the drafting of the Mecklenburg Declaration. By its adoption on May 20, 1775, the people of this North Carolina county became the first in America to declare themselves independent of foreign rule.

The State flag that floats over North Carolina's capitol in Raleigh bears on its folds two dates. May 20, 1775. April 12, 1776. On the initial date, the people of Mecklenburg county meeting in Charlotte were the first in America to declare themselves "... a free and independent people." The second date marks the day on which the Halifax Convention directed the North Carolina members in the Continental Congress to vote for separation from England.

Yes, independence took root early in North Carolina. No wonder that any question involving personal liberties is weighed carefully here. Tolerance not prejudice. Mutual respect for the other fellow and his individual rights. That's the way to maintain this heritage of freedom which is ours to enjoy and to uphold in North Carolina.

N. C. DIVISION
UNITED STATES BREWERS FOUNDATION
INSURANCE BUILDING, RALEIGH, NORTH CAROLINA

Year Around Farming

(Continued from Page 8)

nutrition, growing of new crops and better merchandising of agricultural products is needed before we can get at the practical solution of these difficulties. To bridge the gap between research and practice, improved methods developed in the experimental plot and greenhouses should be further tested in general farming practice before being urged upon the public."

The lack of adequate marketing facilities, as a major handicap in producing more grain, livestock and special crops, is also noted.

The report warns that marketing adjustments must accompany changes in the agricultural program of a community. Research on consumer preference for farm products is suggested as one aid in increasing consumption.

"A recent study of consumer preferences for sweet potatoes in North Carolina indicates that income, price and quality are important factors relating to the preferences expressed by consumers," it is said. "Other aspects of such studies could give valuable information if directed toward determining preferences as to sizes, and types of packages."

Part I of the report is devoted to a brief analysis of North Carolina agriculture. It is stated that of the 31% million acres which comprise the state, 18,617,932 are in farms, and that of this farm acreage, slightly over 40 per cent is classified as cropland. In 1945, 39 per cent of the state's total population was engaged in farming, with another 22 per cent living in rural areas or villages of less than 2,500 population.

North Carolina's rank, in 1946, among the 48 states is given as follows: second in farm population, third in cash farm income from crops, 29th in cash farm income from livestock and livestock products, and 13th in total cash farm income, with a per capita cash farm income of $550, as compared with $1,005 for the United States. Of interest is the statements that per capita cash farm receipts in 1946 were about three times as large as in 1941, although it will be seen that in 1946 it was still only little more than half the comparable figure for the nation as a whole.

It is also significant to note that 83 per cent of the cash farm receipts came from crops, with the three major crops, tobacco, cotton and peanuts, accounting for 71 per cent of the total; tobacco alone accounting for 57 per cent.

Labor Savers on the Farm

A Department Devoted to the Introduction of New Items and Appliances

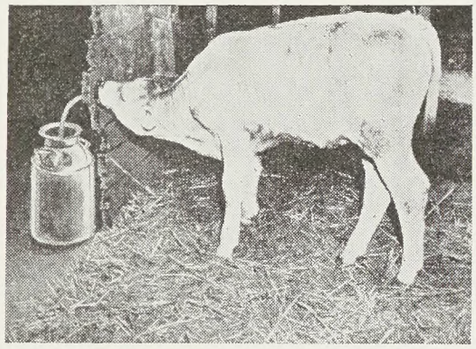
New Calf Nipple Feeder

Calves now have a brand new "mama"!

This "mama" is the latest innovation in scientific calf feeding recently introduced by Dr. H. J. Larson, D.V.M., proprietor of Dr. Larson's Animal Hospital, Fergus Falls, Minn.

The new device, the "Larco Calf Nipple Feeder," allows for natural calf feeding and eliminates "gulping" of milk and such complications as scours, digestive disorders and pot bellies which usually accompany improperly digested milk.

The Larco Calf Nipple Feeder consists of a specially made rubber nipple mounted



over a rubber base mounting which contains a valve, holding milk up at the nipple at all times, much the same as in a cow's teat.

Easy to Mount

This feeding device can be mounted on any feeding stall with great simplicity. A hole is drilled through the partition, 18 to 24 inches from the floor. The rubber base mounting is screwed in place, the nipple secured firmly with a flanged medal disc and the rubber tubing attached on opposite side of the pen.

Milk is then poured into the container on the other side of the stall and calves feed themselves. The Larco does away with teaching calves to drink from pails. Using this method, there are no pails to hold, no milk waste.

The position in which the Larco is mounted for use affords calves a natural feeding posture. Calves feed with head extended or up, eliminating gas or air. In this way, they mix large quantities of saliva with milk, which is swallowed in small "dribbles" directly into the true stomach.

Show Greater Gains

They can help themselves to milk several times an hour, taking small quantities, allowing proper digestion. Even ice cold milk can be safely fed with the Larco, and calves have shown two to three times greater gains compared to those fed by pail.

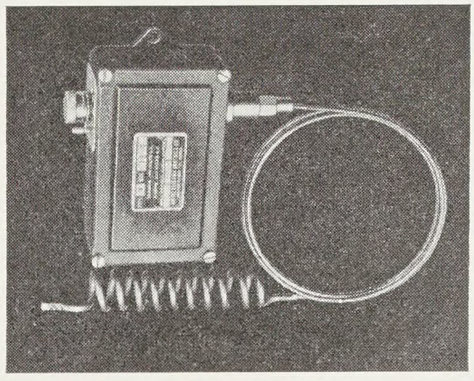
A great time-saving device, it actually saves two to three hours a day on the average farm and eliminates the disagreeable chore of pail-feeding.

The Larco Calf Nipple Feeder is easily cleaned with a unique washing bulb furnished with the equipment. Inserted in the end of the tubing, the washing bulb cleans the entire outfit without removal from the pen.

Temperature Control for Tobacco Barns

The United Electric Controls Company of Watertown, Mass., after lengthy testing announces a new truly precise automatic temperature control, the type W Model 19C, for power-operated tobacco curers. The new control, a modification of a type widely used on industrial ovens, laboratory ovens, incubators and hot plate presses, will maintain temperature within a degree of the setting made on the control. This accurate maintenance of temperature, especially at the early stages of the cure, prevents the too rapid drying that sets the leaf while still green.

The new Type W Model 19C is adjustable in 5 degree steps between its limits of 85 degrees and 185 degrees by means of a simple knob and pointer with an easy-to-read accurately calibrated dial. It can be mounted in any position on any flat



surface and is furnished with a 9-foot tube from control assembly to the highly sensitive coil type bulb. The Type W is unaffected by weather, insects or dirt, the working parts being sealed in a watertight, dust-tight case. The thermostat carries the label of Underwriters Laboratories, Inc.

The new Type W Model 19C is available for use on existing power-operated coal or oil-burning curers, or for inclusion as original equipment on new burners. It operates on 110-125 V AC or 220-250 V AC. A bulletin containing full details of the Type W Model 19C has just been printed and may be obtained by writing United Electric Controls Company's North Carolina Representative, J. L. Highsmith, Box 1367, Durham, N. C.

New Fire Extinguisher

Fire! Fire! Accidental fires can happen on the farm, caused by human carelessness or spontaneous combustion in the hay or elsewhere. Fire engines are miles away. Old farm building grouped together burn fast and a lifetimes work is wiped out. When incipient fires break out, don't be a barehanded hero. Keep a Hero handy, the new, sensational, portable, pressurized, fire extinguisher retailing for only $1.29. Because it is hermetically sealed, cannot leak and needs no refilling or inspections, it is ever ready to fight all types of fires

for years, in all weather. So simple to operate, even a child can pull its trigger and aim its 16 oz., 18 ft. stream (pressurized) at fire. Comes with free wall bracket or can be carried around in tool, car or tractor kits. Precision made by Bostwick Laboratories, Bridgeport 5, Conn., pioneers of self-dispensing packaged power and Hep aerosol. Sold by your farm supplier, grocer, hardware, department stores or write Bostwick Laboratories, Bridgeport 5, Conn.

U. S. Testing Company's report No. 98403 shows that Hero's stream puts out gasoline, fuel oil, grease, paper, electrical and all types of fires in three to ten seconds! Fluid meets Underwriter Laboratories and U. S. Government Of-380 specifications. It contains 90% carbon tetrachloride, 10% other chemicals and CO-2 (Carbon Dioxide) as propellant. Is not injurious to humans, animals or materials it contacts.

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ACROSS THE EDITOR'S DESK

Attend Your Meeting

The season of rural electric co-op annual meetings is near at hand. Start making arrangements now to attend your cooperative meeting.

There are a host of reasons why you, the member, should go to your meeting. It should not be necessary to remind any member of these reasons, but for those who may need reminding, here are a few:

First and foremost, you're in the rural electricity business; and if all your partners (fellow members) took no interest in it, you wouldn't be in business for long.

If you, the owner, aren't going to concern yourself with the operation of the business, who is? Your co-op annual meeting is the time and place especially designated for you to find out the facts about your business and to determine how it shall be run in the future.

Attendance at your annual meeting is outward proof of your cooperation and interest in your rural electric system. And without such cooperation, needless to say, you would still be burning kerosene lamps and cooking with wood. Furthermore, cooperation is the only thing that is going to keep electricity on your farm at reasonable rates.

Officers of Central Electric Membership Corporation

Reading left to right they are Mr. H. A. Cooper, President; Mr. J. B. Jones, Secretary-Treasurer; Mr. J. P. Dalrymple, Vice President.

The Central Electric Membership Corporation at Sanford, North Carolina was organized before the war, but when war broke out it halted all plans for any construction. Since the war it has built six hundred miles of electric lines and given electricity to two thousand more North Carolina farm families in Lee, Chatham, Harnett, Hoke, Moore and Randolph counties.

Storm Clouds Gather

Tide Water Power lost the first round in Onslow County with the Jones-Onslow Electric Membership Cooperative on February 24. A sneak attack was headed off by Fred Harmon, Manager of the Co-op after a Tide Water Power Company truck was seen in the area and in the process of running wires to a residence that had applied to the Co-op for service. Mr. Harmon immediately summoned the Co-op crew and constructed the necessary facilities and served the residence within two hours.

Discussions had been held between REA and Tide Water Power Company and the Co-op had been advised that Company officials were thinking the matter of territory and jurisdiction over and that nothing was to be done until a decision could be reached.

When asked why Tide Water Power Company had attempted to sneak an installation, a company official replied that the company has a franchise to operate within the town limits of Jacksonville and that the area in question being about one and one-half miles to the north, might some day be taken into the town limits.

With such a slim excuse for an unwarranted attack, it is only reasonable to expect more of the same, and we agree with Mr. Harmon that "this act was an abrogation of all agreements as to service territory."

We are just asking, but could this action have anything to do with the fact that 17 REA co-ops have recently formed a "Super" cooperative for the purpose of generating and distributing power to be obtained from the Buggs Island project?

Rural Telephones

Would you like to see a few of the members of your REA cooperative secure telephone service while the remaining members are denied this important convenience? Or would you rather see all the members at least given a chance to have a telephone? There is every reason to believe that you would rather see all your members given an equal chance but because some members are a little overanxious, there is a strong possibility that some members may be penalized.

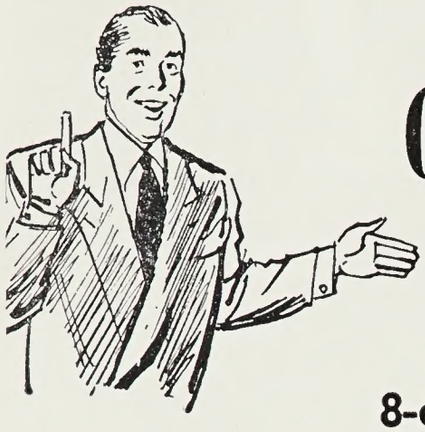
There is much talk now about joint use of REA poles by telephone companies who say that they cannot serve the rural areas if they must erect their own poles. In some cases this arrangement works out all right, but in other cases the telephone company is interested in reaching only the families in a certain area and insist on a joint use contract with your cooperative for that area only . . . What about the other members?

Representative Poage and Senator Lister Hill have introduced bills in both houses of Congress that will empower REA to finance rural telephone systems very much like the method now used to finance electric power systems. From all indications, this bill will soon be enacted into law.

With funds available, you can rest assured that REA will look with favor on any feasible project that will provide telephones to rural areas. An important part of the feasibility of any project will be the possibility of a Joint Use contract with an existing REA electric membership cooperative.

REA telephone cooperatives are expected to be formed that will function very much like your electric cooperative but will be separate. They will have their own board of directors and manager and will be designed for the purpose of providing telephones at a reasonable cost to people in rural areas.

The question now is, whether to enter into a joint use contract with a telephone company to secure telephones for a few or wait until all the members have a chance to be served by an REA telephone cooperative.



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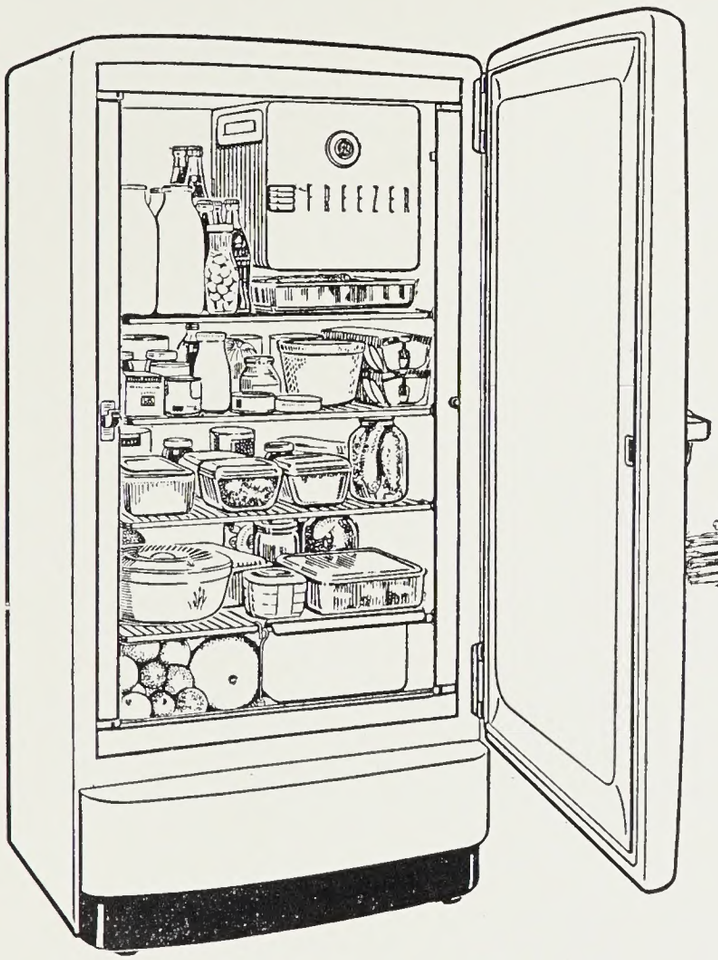

All the space you need for fresh-food storage
in this beautiful 8-cu-ft G-E Refrigerator

Complete home refrigeration service,
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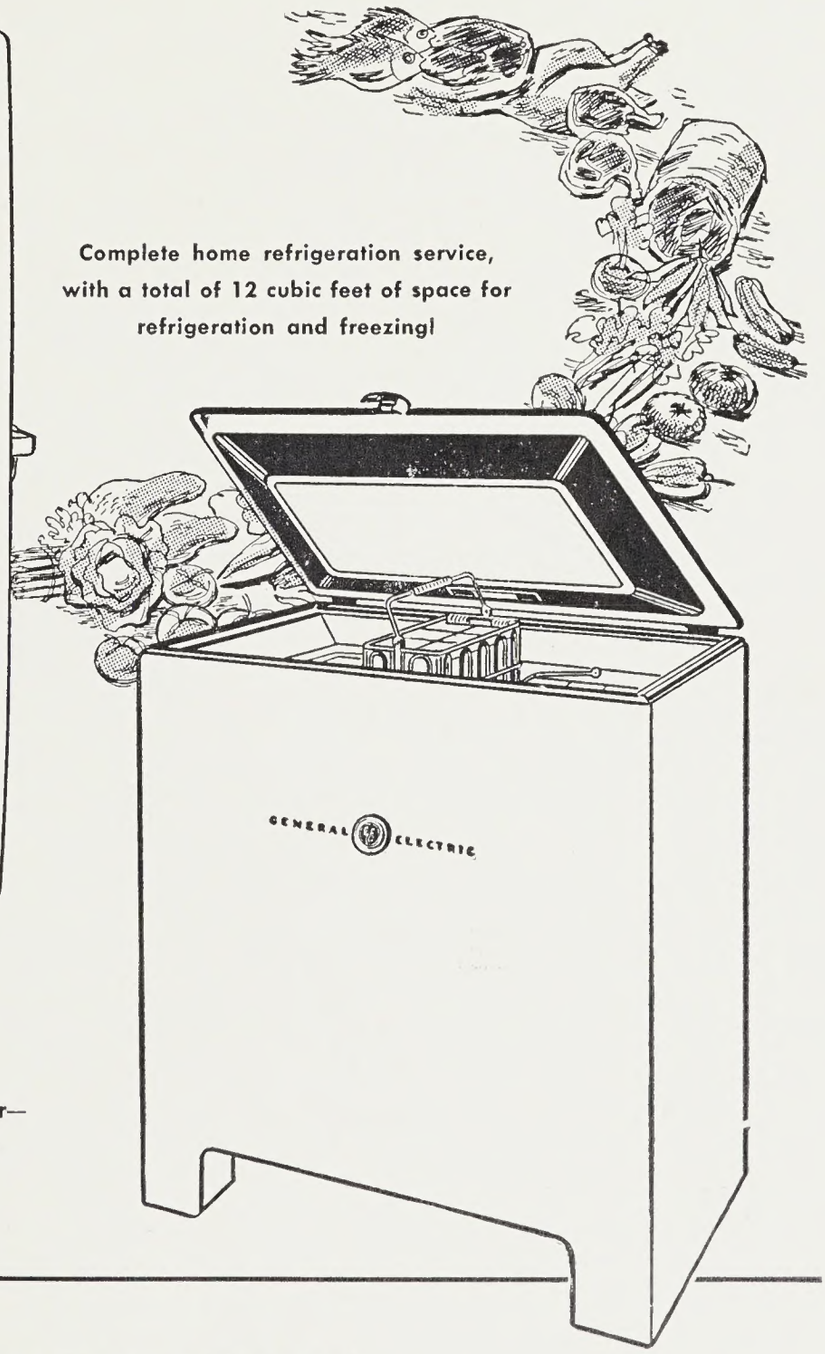

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The G-E 4-cu-ft Home Freezer! Holds 140 lbs
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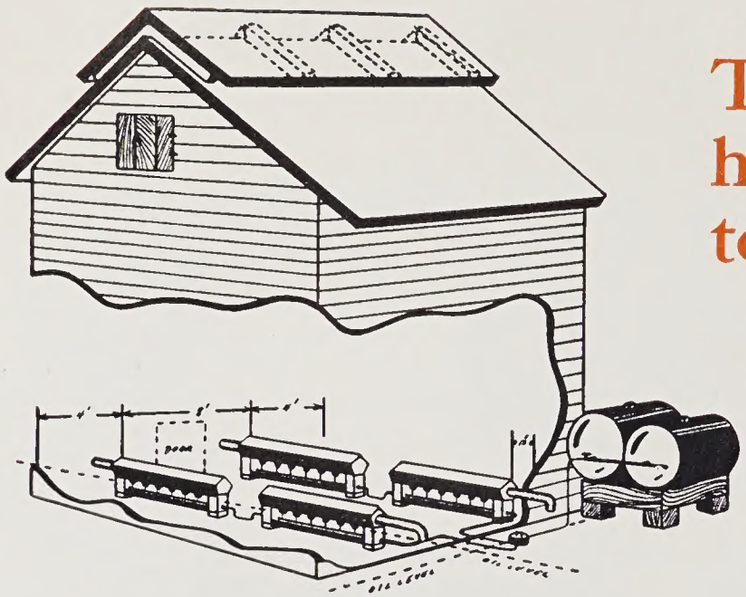

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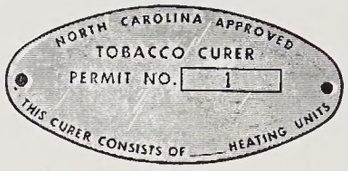
The Henry Vann Curer has NEVER caused a tobacco barn FIRE!

Less Oil is required to operate this amazing Tobacco Curer than any other Oil-Burning Tobacco Curing system on the market.



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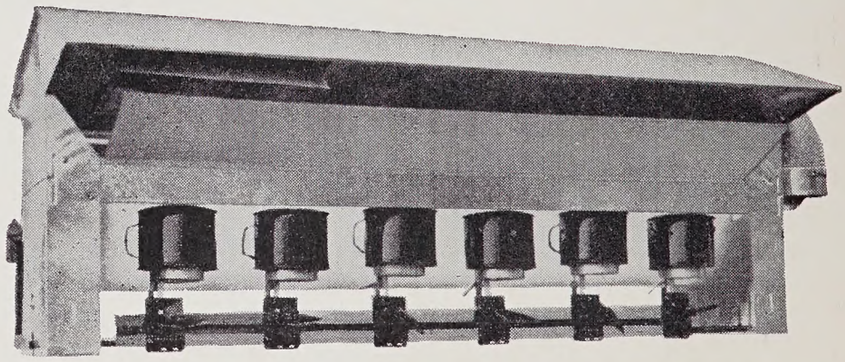

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